

Integration Work Sheet (IWS)

IWS ☐ SP attached Title:

PART I ADMINISTRATIVE INFORMATION *(completed by RI)*

Management Chain: *Name of Responsible Individual (RI), Alternate RI, names of line managers between the RI and Authorizing Individual (AI), name of AI, name of the Authorizing Organization and title of AD*

| <u>Location</u> | <u>Facility</u> | <u>Room(s)</u> | <u>FPOC</u> | <u>ES&H Team</u> | Intended Start Date: _____ <input type="checkbox"/> or to be determined |
|-----------------|-----------------|----------------|-------------|----------------------|--|
| | | | | | Est. Completion Date: _____ <input type="checkbox"/> or ongoing |
| | | | | | |

Employees (E) & Guests (G) assigned to this activity:

| Name | E or G | Employee # | Name | E or G | Employee # |
|------|--------|------------|------|--------|------------|
|------|--------|------------|------|--------|------------|

PART II SCOPE OF WORK & SP *(completed by RI)*

Scope of Work: *Describe the work activity, emphasizing the safety aspects of the work (not the scientific basis) and the use of hazardous material.* ☒ or ☐ scope of work attached

Safety Plan (SP)—Is there a current SP (SP form or OSP or FSP) covering this work? ☐ Yes- attach# _____
☐ New SP needed—attach _____ ☐ SP not needed (see ES&H Manual Doc 2.2 App. A)

PART III HAZARDS/ENVIRONMENTAL ASPECTS & CONTROLS *(completed by RI)*

Hazards/Environmental Aspects and Controls: *Check off the hazards involved in the work.*

| | |
|--------------------------|--|
| <input type="checkbox"/> | Biological <input type="checkbox"/> Infectious materials/other biohazards (pathogens, human fluids, protein toxins, recombinant DNA, exposure to sewage) <input type="checkbox"/> Sharps/ needles <input type="checkbox"/> Human use experiments <input type="checkbox"/> Lab animals <input type="checkbox"/> Other animals (wild, domestic, insects) <input type="checkbox"/> Toxic plants <input type="checkbox"/> Food for humans <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Chemical <input type="checkbox"/> Flammable, volatile or fuming <input type="checkbox"/> Toxic materials (acutely toxic, toxic, systemic toxin, toxic gasses) <input type="checkbox"/> Corrosives /irritants <input type="checkbox"/> Reactive materials (e.g., air/water sensitive; pyrophoric; thermally, shock, or friction sensitive; perchlorate) <input type="checkbox"/> Carcinogens, mutagens, reproductive hazards <input type="checkbox"/> Pesticides <input type="checkbox"/> Beryllium <input type="checkbox"/> Materials of special concern (e.g., alkali metals, fluorine, asbestos, lead, mercury, PCB) <input type="checkbox"/> Other regulated metals (e.g., chromium, copper, nickel, zinc) <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Construction/Equipment/Working Surfaces <input type="checkbox"/> Construction, maintenance, modification, demolition <input type="checkbox"/> Asbestos removal <input type="checkbox"/> Safety system maintenance (deactivated alarms, interlock bypass) <input type="checkbox"/> Drilling, excavation, grading <input type="checkbox"/> Working on contaminated equipment <input type="checkbox"/> Service, maintenance, or modification of de-energized equipment <input type="checkbox"/> Moving/lifting large or heavy items (including use of cranes/hoists, powered lift) <input type="checkbox"/> Machine tools/powder-actuated tools <input type="checkbox"/> Welding, soldering, thermal cutting <input type="checkbox"/> Stored potential energy <input type="checkbox"/> Sharp edges/ shears <input type="checkbox"/> Pulleys, belts, gears, pinch points <input type="checkbox"/> Walking/working on irregular surfaces <input type="checkbox"/> Work at heights > 6 ft <input type="checkbox"/> Roof access <input type="checkbox"/> Steep or slippery terrain <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Discharges to Air <input type="checkbox"/> Produces criteria pollutants (e.g., organics, NOx, ozone, outdoor dust) <input type="checkbox"/> Source regulated by Air District <input type="checkbox"/> Hazardous Air Pollutants (e.g., beryllium, radioactive materials) used <input type="checkbox"/> Solvents, adhesives, coatings <input type="checkbox"/> Exhaust ventilation <input type="checkbox"/> Potential to emit other air pollutants <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Discharges to Water/ Soil/ Groundwater <input type="checkbox"/> Discharge of process water to sanitary sewer or septic system <input type="checkbox"/> Discharge to ground/soil or storm drain system <input type="checkbox"/> Connection to retention tank, percolation pits <input type="checkbox"/> Categorical process (e.g., metal finishing, electronics) <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Ecological and Cultural Resources <input type="checkbox"/> Disturbance to soils, drainage channel, stream bed, floodplain, natural habitats, wetlands, buffer zone, other undisturbed area <input type="checkbox"/> Work in area designated as having cultural resources <input type="checkbox"/> Work in area designated as sensitive habitat <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Electrical <input type="checkbox"/> Batteries (short circuit >10 A or >50 V) <input type="checkbox"/> Capacitors (>10 J electrical energy) <input type="checkbox"/> Electrical power source (>140 V or > 30 A or >10 J of electrical, or 2 or more sources of electrical power.) <input type="checkbox"/> Energized electrical equipment (work on exposed, energized electrical equipment >50 V, 20 A, or portable equipment at other than ground potential) <input type="checkbox"/> Static electricity <input type="checkbox"/> Hi-potential testing (>500 V) <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Emergencies/Earthquakes/Fire <input type="checkbox"/> Potentially unique emergency issues <input type="checkbox"/> Unique earthquake safety issues <input type="checkbox"/> Unique fire safety issues <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Explosives/Firearms <input type="checkbox"/> Explosives, high explosives, propellants, pyrotechnic or similar energetic material <input type="checkbox"/> Mock explosive <input type="checkbox"/> Firearms <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> | Pressure/Noise/Hazardous Atmospheres <input type="checkbox"/> Low Pressure systems <150 psig-gas, <1500 psig liquid, <100 kJ stored energy <input type="checkbox"/> High pressure system >150 psig -gas or >1500 psig liquid ≥100 kJ stored energy <input type="checkbox"/> Pressure systems containing hazardous fluids <input type="checkbox"/> Vacuum systems <input type="checkbox"/> Cryogenics <input type="checkbox"/> Noise (> 85 dB) <input type="checkbox"/> Confined spaces/ oxygen deficiency, asphyxiant <input type="checkbox"/> Hazardous atmospheres (e.g., hydrogen gas) <input type="checkbox"/> Other _____ |

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PART III HAZARDS/ENVIRONMENTAL ASPECTS & CONTROLS *(continued)*

| | | | |
|--------------------------|---|---|--|
| <input type="checkbox"/> | Radiation- Ionizing/Non-Ionizing | <input type="checkbox"/> Radioactive material (encapsulated, non-encapsulated) <input type="checkbox"/> Fissionable material in excess of Table 1 in Doc 20.6 ES&H Manual <input type="checkbox"/> Radiation-generating devices (RGD) (accelerator, x-ray machine, e-beam, high voltage in a vacuum) <input type="checkbox"/> Non-ionizing radiation- class 3a – unattended or invisible, 3b, or 4 lasers, or intense UV, visible, or infrared illumination <input type="checkbox"/> Electric/ magnetic fields < 3 kHz <input type="checkbox"/> Radio frequency/microwaves sources > 3 kHz <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Remediation and Monitoring | <input type="checkbox"/> Grading or excavating in contaminated areas <input type="checkbox"/> Movement of soil <input type="checkbox"/> Disturbing contaminated groundwater <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Storage Tanks | <input type="checkbox"/> Wastewater retention tank <input type="checkbox"/> Tanks storing materials/products <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Temperature/Weather | <input type="checkbox"/> Extremely hot or cold surfaces, steam (burn hazard) <input type="checkbox"/> Weather exposure or temperature extremes (harsh weather, lightning, temperature extremes) <input type="checkbox"/> Exposure to intense sunlight <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Transportation | <input type="checkbox"/> Hazardous material or waste transportation <input type="checkbox"/> Radioactive material or waste transportation <input type="checkbox"/> Transportation of material between sites <input type="checkbox"/> Use of vehicles (aircraft, ATV, boat) <input type="checkbox"/> Off-road driving <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Waste | <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Radioactive waste <input type="checkbox"/> Medical waste <input type="checkbox"/> Mixed waste or other waste with no disposal option <input type="checkbox"/> Solid wastes (> routine quantities) <input type="checkbox"/> Material for recycling <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Worker Capability/Motion | <input type="checkbox"/> Lifting manually >30 pounds <input type="checkbox"/> Work involving repetitive motion <input type="checkbox"/> Hand tools <input type="checkbox"/> Work alone <input type="checkbox"/> Work after hours <input type="checkbox"/> Work involving individuals <18 years of age <input type="checkbox"/> Work requiring specific unusual physical capabilities <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> | Other | <input type="checkbox"/> Hazards or environmental aspects not listed: _____ | |

Hazard Description and Controls: *Describe each hazard listed above and the specific controls: (engineered controls, personal protective equipment, etc.)*

Hazard Description

Control

Training: *List the required training and the individual requiring the training by name*

Name

Employee #

Course#

PART IV SITE LOCATION/DIRECTORATE ADDITIONS

Site Location/Directorate-Specific Additions: *Site location (e.g., S-300, NTS, off-site) or Directorate-specific additions can be added here.*

PART V ES&H DOCUMENTS/PERMITS/APPROVALS MEDICAL SURVEILLANCE

ES&H Documents / Permits / Approvals / Medical Surveillance: *The following controls are required:*

| | | |
|--------------------------|--|--|
| <input type="checkbox"/> | ES&H Documents needed: <input type="checkbox"/> IWS only-(WAL B) <input type="checkbox"/> IWS & Safety Plan- (IWS/SP-WAL C) <input type="checkbox"/> Other ES&H Documents: _____ | |
| <input type="checkbox"/> | LLNL Work Permits/Approvals: _____ | |
| <input type="checkbox"/> | Agency Work Permits/Approvals: _____ | |
| <input type="checkbox"/> | Medical Surveillance/Certification: _____ | |

PART VI SIGNATURES

As the RI, I have reviewed the hazards and agree to implement the controls identified in this IWS:

Responsible Individual (RI): _____ **Date:** _____

The proposed work falls within the safety envelope of the facility/area and may commence once authorized:

FPOC Concurrence _____ **Date:** _____

FPOC Concurrence (if required) _____ **Date:** _____

I have reviewed the hazards and controls for this work and concur that the work may commence once authorized:

Site Location/Directorate Specific Concurrence (if required) _____ **Date:** _____

The hazards and controls have been properly identified and the work may commence once authorized (Note: ES&H Team or designee concurrence is required for WAL B; ES&H Team concurrence is required for WAL C.)

ES&H Concurrence: _____ **Title:** _____ **Date:** _____

Approval: *The controls have been confirmed and this proposed activity is authorized to proceed.*

Authorizing Individual (AI) _____ **Date:** _____

Integration Work Sheet (IWS)

To be completed by the ES&H Team or their Designee or the RI (Transfer information on the checked items to Part V of the IWS form)

ES&H Documents:

- ☐ **IWS only needed** (WAL B- ES&H Team or designee concurrence required)
- ☐ **IWS & Safety Plan (IWS/SP) needed** (WAL C - ES&H Team concurrence required)
- ☐ **Other ES&H Documents needed:**
 - ☐ Safety Basis document update needed (e.g., USQ or other)
 - ☐ Engineering safety note needed
 - ☐ NEPA document needed
 - ☐ Job Hazard Analysis needed (JHA) _____
 - ☐ Other _____

Attach required documentation or list where the documents can be found: _____

LLNL Permits/Approvals/Consultations/Reporting:

- ☐ Building and/or equipment drain
- ☐ Interior concrete floor, wall, and ceiling penetration
- ☐ Asbestos permit
- ☐ Confined space permit
- ☐ Hot work
- ☐ Hazardous work permit (ES&H Manual Doc. 17.1 Sec. 3.18)
- ☐ Lead work
- ☐ Radiation work permit
- ☐ Roof access
- ☐ Soil excavation, grading, and/or drilling permit
- ☐ CMID tag needed
- ☐ Radioactive waste
- ☐ Waste minimization analysis needed
- ☐ Energy efficiency or water conservation analysis needed
- ☐ LLNL Committee approval (committee name) _____
- ☐ Other: _____

Agency Work Permits/Approvals:

- ☐ Air permit/exemption
- ☐ NESHAP
- ☐ Waste permit/exemption
- ☐ Water discharge permit/exemption
- ☐ Fish and Wildlife consultation
- ☐ Other: _____

Medical Surveillance/Certification:

- ☐ Asbestos worker
- ☐ Beryllium worker
- ☐ Works with Biohazards
- ☐ Works with Carcinogens
- ☐ Hazardous Waste worker
- ☐ Hearing Conservation required
- ☐ Lead handler
- ☐ Commercial Drivers License required
- ☐ Crane Operator
- ☐ Explosives worker
- ☐ Firefighter
- ☐ Laser Eye exposure potential
- ☐ Respirator required
- ☐ PAP ☐ PSAP ☐ PSO _____
- ☐ Other: _____